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FY-69

QUARTERLY REPORT

No. 3

28 February 1969

(1 December 1968 - 28 February 1969)

Prepared by:

[redacted]

25X1

5X1

Approved by:

Declass Review by NGA.

[redacted]

Date: 27 March 1969

SECTION I

INTRODUCTION

Approved For Release 2005/02/17 : CIA-RDP78B04770A001300020018-8

28 Feb 69

PROGRAM OBJECTIVE

To investigate through studies, tests, and the fabrication and use of engineering breadboard equipment, new methods or devices which will further the state of the art in photographic techniques and practices as it pertains to improved extraction of collected intelligence information from photographic materials.

28 Feb 69

SUMMARY

5X1

1. This Contract [redacted] FY-69 Quarterly Report No. 3 is submitted in lieu of the February 1969 Monthly Report, and covers progress for the months of December 1968, and January and February 1969.

2. Detailed reports on approved, active PARs are found in Section II of this report.

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DISCUSSION

3. PAR Status. The table below lists all PARs in numerical order for ready reference, and the title (condensed in some cases) and status of each.

PAR	Title	Status
201	Travel and Liaison	Active
202/ 224	[redacted] Precision Enlarger/* 3X - 15X Enlarger	Completed/TWX 6351 dtd 21 Jan 66
203	Rapid Access Printer	Completed 4 Aug 65
204	Contact Chip Printer	Termination Rpt completed 27 Jan 65
205	Precision 4X Enlarger	Termination Rpt completed 27 Jan 65
206	Reversal Processing Study	Completed 21 May 65
207	Contact Printer Study	Completed 6 Apr 66
208	Non-Elec. Image Enhancement	Cancelled
209	Phosphor Viewer	Cancelled
210	Laminated Slides	Completed 4 Sep 64
211	Processing Effects Study	Completed 28 Oct 65
212	Color Acq. System Review	Completed 28 Oct 65
213	Color Reprod. Review	Completed 13 Aug 65
214	Roller Transport Processor (12-Inch)	Closed/TWX 7284 dtd 23 May 66
215	Roller Transport Processor (24-Inch)	Closed/TWX 7284 dtd 23 May 66
216	Laser Photographic Exposure	Completed 12 Feb 65
217	Optimization of Lasers	Completed 9 Nov 65
218	Autofocus Systems	Not to be submitted
219	Opt. vs Contact Pg. 1:1	Not to be submitted
220	Static Elec. Hold-Down	Disapproved

* Formerly called the Briefing Print Enlarger.

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PAR	Title	Status
221	Lens Bench Manual	Not to be submitted
222	Auto Stereo Regstrn System	Completed 3 Mar 65
223	Monochr. Lens System	Disapproved
225	Micro-D Training Program	Terminated
226	Edge Trace Meas., Micro-D	Completed
227	Color Viewer	Disapproved
228	Vectograph Study	Not to be submitted
229	Optical Design Film Viewer	Not to be submitted
230	10X Color Lens	Disapproved
231	10-20-40X Color Lamphouse	Disapproved
232	Automated Edge Trace Device	Disapproved
233	Zoom (6X to 60X) Projection Lens	Terminated/TWX 7878 dtd 26 Jul 66
234	MTF Exposure Device	Disapproved
235	Automation Program Study	Disapproved
236	Film Disposal Rewind Unit	Disapproved
237	Briefing Aids	Completed 25 Jul 65
238	Equipment Installation	Closed/TWX 7284 dtd 23 May 66
239	Administration	Closed
240	Not Assigned	-
241	Not Assigned	-
242A	Color Demonstration Material	Completed 29 Mar 66
243A	[redacted] Precision Enlarger*	Completed 22 Sep 67
244	Spare Parts for RT Processors	Completed 21 Nov 67
245	BPE High Magnification Lens Sets	Completed 26 Mar 68
246	RT-12 and RT-24 Operational Improvements	Completed 25 Feb 68

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* Formerly called the Briefing Print Enlarger.

28 Feb 69

PAR	Title	Status
247	Base Spare Parts Kit	Completed 25 Nov 68
248	BPE High-Magnification Lens Set	Completed 15 Nov 68
249	[redacted] Precision Enlarger Prototype (BPE) Operational Improvements and Maintenance	Active
250	[redacted] Precision Enlarger Mod II (Prototype)	Disapproved
251	Image Enhancement Studies Using Ring Smear Techniques	Disapproved

SECTION II

PAR PROGRESS

SECRET

[redacted]

25X1

FY-69 Quarterly Report No. 3

PAR 249
28 Feb 69

5X1 SUBJECT: [redacted] Precision Enlarger Prototype (BPE) Operational Improvements and Maintenance

TASK/PROBLEM

5X1 1. Provide photographic enlarger maintenance at the customer's facility for one [redacted] Precision Enlarger (BPE) and three 10-20-40X Enlargers.

DISCUSSION

2. Contractor personnel visited the customer's facility three times during the report period and performed the following maintenance while there.

a. During the week beginning 9 December 1968 (reported in the December 1969 monthly report): Maintenance checks on four 10-20-40X enlargers and one BPE enlarger. In addition, the 10-20-40X S/N 123 had a slipping gear on the "Y" coordinate counter. The gear was drilled and pinned for more effective operation.

b. During the week beginning 6 January 1969 (reported in the January 1969 monthly report):

(1) The lamp in the "E" condenser on the BPE was changed because the "getter" that is spot welded to one of the wires was broken off inside the bulb.

(2) Two switches were replaced in the Lectra timer.

(3) Defective lights were replaced in the "Y" coordinate readout.

(4) A maintenance check on the BPE enlarger was performed (see check list for 8 January 1969 attached).

c. During the week of 3 February 1969:

(1) The four 10-20-40X enlargers received their regular two-month check in accordance with the prescribed Preventive Maintenance check lists (see attached). No major problems were noted. Two of the enlargers still need static eliminator power unit A-2 replaced as reported previously; however, the customer has not yet procured these parts.

6X1 (2) The [redacted] Precision Enlarger (BPE) was inspected and the monthly Preventive Maintenance was performed on schedule (see check list dated 5 February 1969). The bridge rectifier (CR4) that supplies dc voltage to the solenoid of the fluid brushes was replaced to correct the problem reported in January.

d. During the week of 17 February, a call was received from the customer that the gate glass on the "D" lens of the BPE had become uncemented and fallen off. To effectively re-cement the lens it had to be returned to the contractor's facility. Because this type of repair is outside the scope of preventive maintenance, it was decided by agreement with the customer to absorb the cost for repair on the PAR.

PLANNED ACTIVITY

3. Complete repair of the "D" lens, and return it to the customer.

4. Perform monthly preventive maintenance on the BPE during the week beginning 3 March 1969.

28 Feb 69

PREVENTIVE MAINTENANCE SCHEDULE CHECK LIST

25X1

[ ] PRECISION ENLARGER

25X1

Assigned to

√	Item	Description

Daily Interval

	1	Check the four indicator lamps on the sub-control panel.
	2.1	Check closed-negative-gate interlock.
	2.2	Check interlock that causes vertical transport slow speed.
	2.3	Check interlock that disables negative transport after fluid injection.
	2.4	Check operation of microswitch that functions when manual-film-movement knob is pushed in.
	3.1	Check the indicator lamps for the two attenuator banks of the easel photometer.
	3.2	Check the meter scale illuminator lamp of the easel photometer.
	3.3	Check the antifatigue lamp in photo-multiplier tube housing.
	4	Clean the glass plates of the negative gate.

One-Week Interval

	1	Vacuum-clean the enlarger.
	2	Check, and if necessary, clean the objective lenses and all glass filters.
	3	Vacuum-clean the front surface of the easel.
	4	Check the fiber optics for broken fibers.

√	Item	Description

One-Month Interval

✓	1	Wax the steel rails of the lens ramp and of the easel.
✓	2	Install new air filter in lamphouse.
✓	3	Clean the nylon brushes of the fluid removal system.
✓	4	Check all tubing and hoses for cracks and air leakage.
✓	5	Check and, if necessary, clean the lenses of the condenser lens assemblies.

Six-Month Interval

	1.1	Make a photographic check on all six matching sets of objective and condenser lens assemblies.
	1.2	Be sure that film is tracking properly in both directions on the negative transport system.
	2	Check the timing belts of the film transport system, of the vertical drive system, and of the easel drive assembly for wear.

Checked by: CAP/HR Date 8 Jan 69

REMARKS:

Replaced "F" condenser bulb.

GROUP 1
EXCLUDED FROM AUTOMATIC DOWNGRADING AND DECLASSIFICATION

PREVENTIVE MAINTENANCE SCHEDULE CHECK LIST

TWO-MONTH INTERVAL

25X1

PRECISION ENLARGER, 10-20-40X

Assigned T
Date: ____
Machine Se

✔	Item	Description
	1	Film Transport
* ✔	1.1	Static Removal Unit
** ✔	1.2	Guide Roller Flanges
✔	1.3	Air Knives
✔	1.4	Belts and Pulleys
✔	1.5	Lubricate Bearings
	2	Easel and Stencil Assembly
NA	2.1	Easel
NA	2.2	Air Pressure System
	3	Illuminator
✔	3.1	Glass
✔	3.2	Lamps
✔ 4		Negative Gate Interlock
✔ 5		Lenses
✔ 6		Stripper Plate
	7	Air Pressure System
	7.1	Air Lines
NA	7.2	Compressor Control
NA	7.3	Relief Valve
	7.4	Regulator
NA	7.5	Filter-Compressor
NA	7.6	Drain Storage Tank

✔	Item	Description
	8	Vacuum Pump Assembly
NA	8.1	Hoses and Couplings
NA	8.2	Pump
NA	8.3	Oil Level
	9	Lamp House Assembly
✔	9.1	Housing
✔	9.2	Filter (Photographic)
✔	9.3	Light Leaks
✔	9.4	Lamp House Blower
	10	Immersion System
*** ✔	10.1	Ejectors
✔	10.2	Hoses and Couplings
✔	10.3	Blower
✔	10.4	Fluid Level
✔ 11		Lamp House Control
✔ 12		Analyzer
	13	Photo Check
	13.1	Resolution
	13.2	Uniformity
✔ 14		General Inspection

Initials CAC

REMARKS:

* Power pack needs replacement.
** Flanges froze in 9.5-inch position.
*** Upper ejector bent; requires replacement.

Form No. MS-103
March 26, 1966

PREVENTIVE MAINTENANCE SCHEDULE CHECK LIST

TWO-MONTH INTERVAL

PRECISION ENLARGER, 10-20-40X

25X1

Assigned To: _____

Date: _____

Machine Serial

✔	Item	Description
	1	Film Transport
* ✔	1.1	Static Removal Unit
** ✔	1.2	Guide Roller Flanges
✔	1.3	Air Knives
✔	1.4	Belts and Pulleys
✔	1.5	Lubricate Bearings
	2	Easel and Stencil Assembly
NA	2.1	Easel
NA	2.2	Air Pressure System
	3	Illuminator
✔	3.1	Glass
✔	3.2	Lamps
***	4	Negative Gate Interlock
✔	5	Lenses
✔	6	Stripper Plate
	7	Air Pressure System
✔	7.1	Air Lines
NA	7.2	Compressor Control
NA	7.3	Relief Valve
✔	7.4	Regulator
NA	7.5	Filter-Compressor
NA	7.6	Drain Storage Tank

✔	Item	Description
	8	Vacuum Pump Assembly
NA	8.1	Hoses and Couplings
NA	8.2	Pump
NA	8.3	Oil Level
	9	Lamp House Assembly
✔	9.1	Housing
✔	9.2	Filter (Photographic)
✔	9.3	Light Leaks
✔	9.4	Lamp House Blower
	10	Immersion System
✔	10.1	Ejectors
✔	10.2	Hoses and Couplings
✔	10.3	Blower
✔	10.4	Fluid Level
✔	11	Lamp House Control
✔	12	Analyzer
	13	Photo Check
	13.1	Resolution
	13.2	Uniformity
	14	General Inspection

Initials CAC

REMARKS:

* Power pack needs replacement.
** Flanges froze in the 9.5-inch position.
*** Cam requires replacement.

Form No. MS-103
March 26, 1966

PREVENTIVE MAINTENANCE SCHEDULE CHECK LIST

TWO-MONTH INTERVAL

PRECISION ENLARGER, 10-20-40X

25X1

Assigned To: _____
Date: _____
Machine Serial No

✔	Item	Description
	1	Film Transport
✔	1.1	Static Removal Unit
✔	1.2	Guide Roller Flanges
✔	1.3	Air Knives
✔	1.4	Belts and Pulleys
✔	1.5	Lubricate Bearings
	2	Easel and Stencil Assembly
NA	2.1	Easel
NA	2.2	Air Pressure System
	3	Illuminator
✔	3.1	Glass
*✔	3.2	Lamps
✔	4	Negative Gate Interlock
✔	5	Lenses
✔	6	Stripper Plate
	7	Air Pressure System
✔	7.1	Air Lines
NA	7.2	Compressor Control
NA	7.3	Relief Valve
✔	7.4	Regulator
NA	7.5	Filter-Compressor
NA	7.6	Drain Storage Tank

✔	Item	Description
	8	Vacuum Pump Assembly
NA	8.1	Hoses and Couplings
NA	8.2	Pump
NA	8.3	Oil Level
	9	Lamp House Assembly
✔	9.1	Housing
✔	9.2	Filter (Photographic)
✔	9.3	Light Leaks
✔	9.4	Lamp House Blower
	10	Immersion System
**✔	10.1	Ejectors
✔	10.2	Hoses and Couplings
✔	10.3	Blower
✔	10.4	Fluid Level
✔	11	Lamp House Control
✔	12	Analyzer
	13	Photo Check
	13.1	Resolution
	13.2	Uniformity
✔	14	General Inspection

Initials CAC

REMARKS:

* One lamp needs replacement.
** Upper ejector bent; needs replacement.

Form No. MS-103
March 26, 1966

PREVENTIVE MAINTENANCE SCHEDULE CHECK LIST

TWO-MONTH INTERVAL

PRECISION ENLARGER, 10-20-40X

25X1

Assigned To: _____

Date: _____

Machine Serial

✔	Item	Description
	1	Film Transport
✔	1.1	Static Removal Unit
✔	1.2	Guide Roller Flanges
✔	1.3	Air Knives
✔	1.4	Belts and Pulleys
✔	1.5	Lubricate Bearings
	2	Easel and Stencil Assembly
NA	2.1	Easel
NA	2.2	Air Pressure System
	3	Illuminator
✔	3.1	Glass
✔*	3.2	Lamps
✔	4	Negative Gate Interlock
✔	5	Lenses
✔	6	Stripper Plate
	7	Air Pressure System
✔	7.1	Air Lines
NA	7.2	Compressor Control
NA	7.3	Relief Valve
✔	7.4	Regulator
NA	7.5	Filter-Compressor
NA	7.6	Drain Storage Tank

✔	Item	Description
	8	Vacuum Pump Assembly
NA	8.1	Hoses and Couplings
NA	8.2	Pump
NA	8.3	Oil Level
	9	Lamp House Assembly
✔	9.1	Housing
✔	9.2	Filter (Photographic)
✔	9.3	Light Leaks
✔	9.4	Lamp House Blower
	10	Immersion System
✔	10.1	Ejectors
✔	10.2	Hoses and Couplings
✔	10.3	Blower
✔	10.4	Fluid Level
✔	11	Lamp House Control
✔	12	Analyzer
	13	Photo Check
	13.1	Resolution
	13.2	Uniformity
	14	General Inspection

Initials CAC

REMARKS:

* Three lamps need replacement.

Form No. MS-103
March 26, 1966

SECRET

MAB 849
28 Feb 69

PREVENTIVE MAINTENANCE SCHEDULE CHECK LIST

5X1

PRECISION ENLARGER

5X1

Assigned to

√	Item	Description

Daily Interval

√	Item	Description
✓	1	Check the four indicator lamps on the sub-control panel.
✓	2.1	Check closed-negative-gate interlock.
✓	2.2	Check interlock that causes vertical transport slow speed.
✓	2.3	Check interlock that disables negative transport after fluid injection.
✓	2.4	Check operation of microswitch that functions when manual-film-movement knob is pushed in.
✓	3.1	Check the indicator lamps for the two attenuator banks of the easel photometer.
✓	3.2	Check the meter scale illuminator lamp of the easel photometer.
✓	3.3	Check the antifatigue lamp in photo-multiplier tube housing.
✓	4	Clean the glass plates of the negative gate.

One-Week Interval

√	Item	Description
	1	Vacuum-clean the enlarger.
	2	Check, and if necessary, clean the objective lenses and all glass filters.
	3	Vacuum-clean the front surface of the easel.
	4	Check the fiber optics for broken fibers.

√	Item	Description

One-Month Interval

√	Item	Description
✓	1	Wax the steel rails of the lens ramp and of the easel.
✓	2	Install new air filter in lamphouse.
✓	3	Clean the nylon brushes of the fluid removal system.
✓	4	Check all tubing and hoses for cracks and air leakage.
✓	5	Check and, if necessary, clean the lenses of the condenser lens assemblies.

Six-Month Interval

	Item	Description
	1.1	Make a photographic check on all six matching sets of objective and condenser lens assemblies.
	1.2	Be sure that film is tracking properly in both directions on the negative transport system.
	2	Check the timing belts of the film transport system, of the vertical drive system, and of the easel drive assembly for wear.

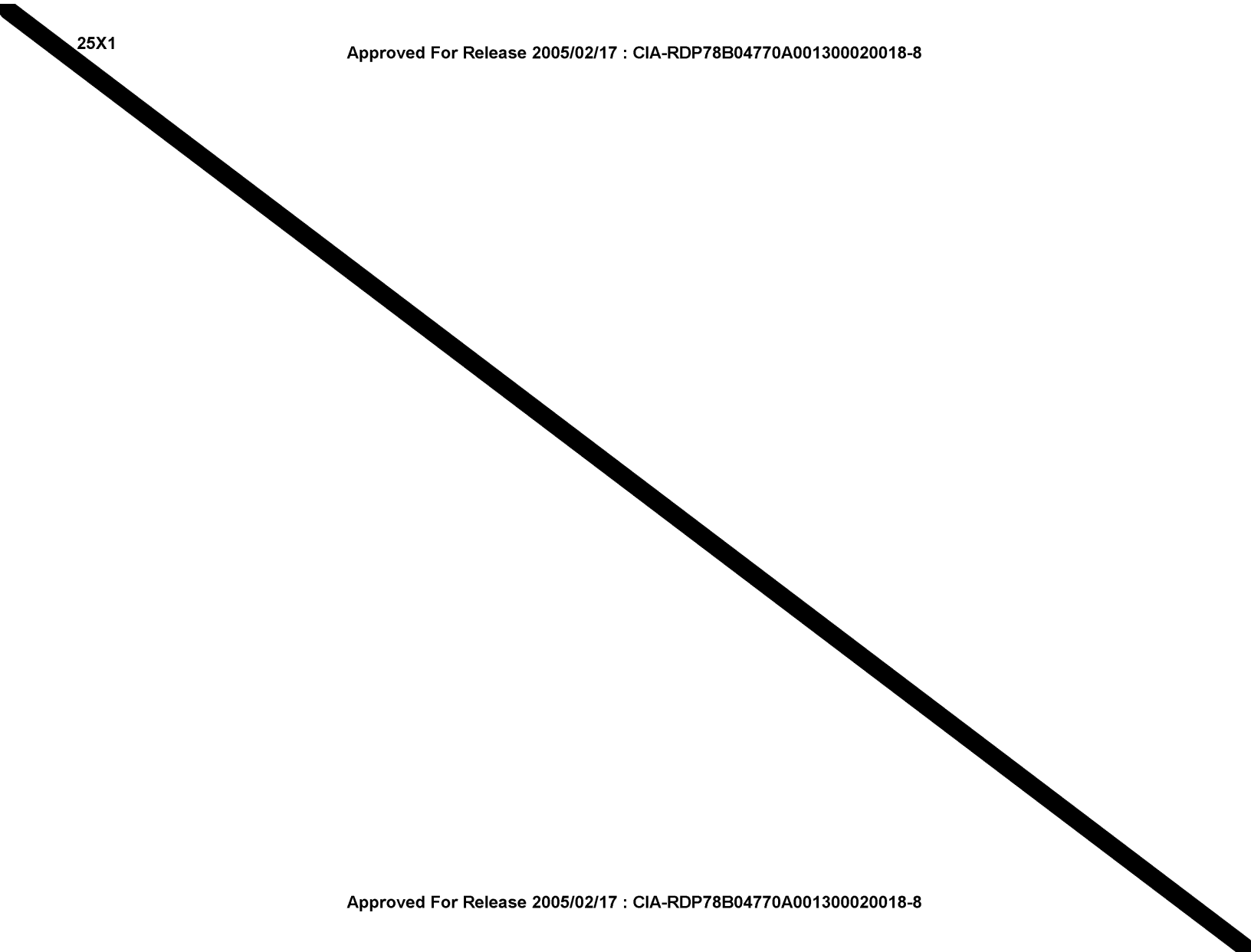
Checked by: CAC Date 5 Feb 69

REMARKS:

Replaced rectifier CR4 in fluid brush circuit; replaced two lamps in "Y" readout; replaced two lamps in "X" readout.

SECTION III

FISCAL SUMMARY



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